

AMENDMENTS TO THE CLAIMS

Please amend the claims as noted below, without prejudice to subsequent renewal. The listing of claims below replaces all prior versions, and listings, of claims in the application.

These amendments introduce no new matter and support for the amendment is replete throughout the specification and claims as originally filed. These amendments are made without prejudice and are not to be construed as abandonment or dedication of the previously claimed subject matter, or agreement with any objection or rejection of record.

Listing of Claims:

1.-115. (Cancelled)

116. (Original) A composite material, comprising:

a matrix; and

one or more nanostructures, the one or more nanostructures each comprising a core and at least one shell, the core comprising a first semiconducting material having a conduction band and a valence band, the shell comprising a second semiconducting material having a conduction band and a valence band, and the first and second materials having a type II band offset.

117. (Original) A composite material as in claim **116**, wherein the conduction band of the first material is lower than the conduction band of the second material, and the valence band of the first material is lower than the valence band of the second material.

118. (Original) A composite material as in claim **116**, wherein the conduction band of the first material is higher than the conduction band of the second material, and the valence band of the first material is higher than the valence band of the second material.

119. (Original) A composite material as in claim **116**, wherein the matrix comprises at least one polymer, comprises at least one glass, or is a small molecule or molecular matrix.

Appl. No. 10/656,916
Amdt. Dated January 26, 2006
Reply to Office action of October 31, 2005

120. (Original) A composite material as in claim **116**, wherein the matrix conducts both electrons and holes, conducts substantially only holes, conducts substantially only electrons, is semiconducting, or is substantially nonconductive.

121. (Original) A composite material as in claim **116**, wherein the one or more nanostructures comprise one or more of: nanocrystals, nanowires, branched nanowires, or nanotrapods.

122.-199. (Cancelled)